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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,297	03/31/2006	Cindy Castado	VB60452	9309
23347 7590 06/24/2008 GLAXOSMITHKLINE CORPORATE INTELLECTUAL PROPERTY, MAI B482 FIVE MOORE DR., PO BOX 13398 RESEARCH TRIANGLE PARK, NC 27709-3398				
EXAMINER ARCHIE, NINA				
ART UNIT 1645		PAPER NUMBER		
NOTIFICATION DATE 06/24/2008		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USCIPRTP@GSK.COM  
LAURA.M.MCCULLEN@GSK.COM  
JULIE.D.MCFALLS@GSK.COM

### Office Action Summary

**Application No.**

10/574,297

**Applicant(s)**

CASTADO ET AL.

**Examiner**

Nina A. Archie

**Art Unit**

1645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-66, 69 and 70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-66 and 69-70 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

1. Group I: claims 1-8 and 11-66 drawn to an immunogenic composition and a vaccine.
2. Group II: claims 9-10 drawn to an immunogenic composition comprising a polynucleotide encoding a polypeptide.
3. Group II: claims 69-70 drawn to a method for treating or preventing Bordetella infection.

The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

4. The technical feature of Group I is an immunogenic composition comprising an amino acid sequence which has at least 85% identity to an amino acid sequence selected from the group consisting of SEQ Group 2, over the entire length of said sequence from SEQ Group 2, or an immunogenic composition fragment thereof, and a pharmaceutically acceptable excipient. The technical feature of Group I is anticipated by Rosen et al WO 2001/054733 Date August 2, 2001 teaches an immunogenic composition comprising an immunogenic polypeptide comprising an amino acid sequence which has at least 85% identity to an amino acid sequence from SEQ ID NO: 2 from Group 2.
5. The technical feature of Group II is an immunogenic composition comprising a polynucleotide encoding a polypeptide.

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6. Group III is a method of use of the technical feature of Group I, immunogenic composition.

Group II-III lacks unity with Group I because they do not have the same technical feature.

The technical feature of Group I, an immunogenic composition comprising an amino acid sequence which has at least 85% identity to an amino acid sequence from SEQ ID NO: and a pharmaceutically acceptable excipient is known in the art. Group I lacks unity with Groups II, because the technical feature of Group I is anticipated by the art and therefore not "special" within the meaning of PCT Rule 13.2 because it does not provide for a contribution that the claimed invention makes over the art.

#### **Polypeptide Election Requirement to Groups I, II, and III**

In addition, Groups I-III, detailed above, read on patentably distinct sequences. Each sequence is patentably distinct because they are structurally different and a further restriction is applied to each Group.

Applicant must further elect:

For Groups I, II, and III choose the polypeptide from Group 1 or Group 2 in the immunogenic composition.

**Applicant is advised that examination will be restricted to only the elected nucleotide sequence and should not be construed as a species election.**

#### **Election of Species**

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

#### **Antigen Election Requirement to Group I and Group III**

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In addition, Groups I and III, detailed above, read on patentably distinct composition comprising antigens. Each antigen is patentably distinct because they have different biochemical and immunological properties and a further restriction is applied to each Group.

For Groups I and III

1. Pertussis toxin;
2. Adenylate cyclase;
3. Dermonecrotic toxin;
3. Lipopolysaccharide;
4. Type III ss

#### **Antigen Election Requirement to Group I and Group III**

In addition, Groups I and III, detailed above, read on patentably distinct composition comprising antigens. Each antigen is patentably distinct because they have different biochemical and immunological properties and a further restriction is applied to each Group.

For Groups I and III

1. PRP capsular oligosaccharide or polysaccharide from Haemophilus Influenzae B Polysaccharide;
2. Hepatitis B surface antigen (HbsAg);
3. Inactivated Polio Vaccine;
3. N. meningitidis protein;
4. Men A, C, W, or Y capsular polysaccharides or oligosaccharides;
5. Capsular polysaccharides or oligosaccharides from S. pneumoniae;
6. Killed Attenuated Hepatitis A virus.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nina Archie whose telephone number is 571-272-9938. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, Shanon Foley can be reached on 571-272-0898. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nina A Archie/

Examiner, Art Unit 1645

/N. A. A./

Examiner, Art Unit 1645

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